SECTION IX:

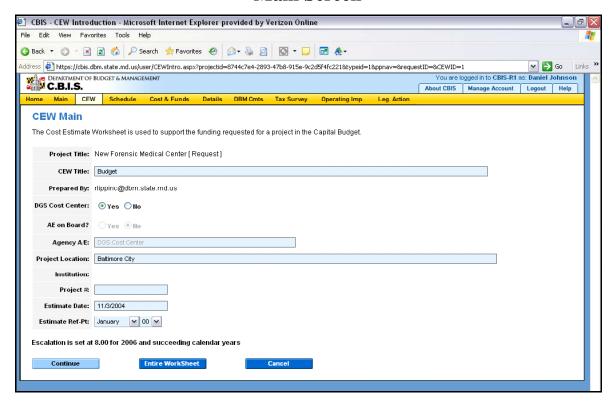
INSTRUCTIONS FOR

COMPLETING A

COST ESTIMATE WORKSHEET

(CEW)

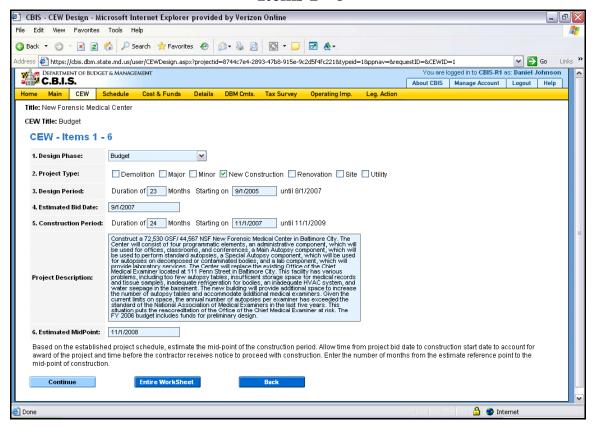
Cost Estimate Worksheet Main Screen



Click "CEW" on the dark yellow tool bar; CBIS will display a "CEW List" Screen. Click "Add" and CBIS will display the screen shown above. You may enter data directly in the fields indicated. **Project Title** The field is automatically populated with the project title entered in the "Main" Screen on the dark yellow tool bar. **CEW Title** If there is more than one CEW for this project, enter a distinctive name in this field for **this particular** CEW. Prepared By: CBIS will populate this field using the LOGIN name of the person entering the information. DGS Cost If the CEW was prepared by the DGS Cost Center, select "Yes." If not, select Center "No." A/E on Board? Enter "Yes" or "No." Agency A/E Enter the Agency A/E name or company name here. **Project Location** Enter the subdivision where the project is located. If applicable, the name of the institution will automatically populate this field. Institution Project # If applicable, enter the project number. DGS only assigns a project number after a project has received an authorization from the General Assembly.

	Cost Estimate Worksheet Main Screen (Continued)
Estimate Date	Enter the date the CEW information was entered into CBIS.
Estimate Reference Point	Enter the Estimate Reference Point. It is the date on the source that was used to prepare the cost estimates. For example, if Means Construction Cost Data 2005 were used to estimate the costs of the project, the estimate reference point would be January 2005. Click "Continue." CBIS will display "CEW Items 1 - 6."

Cost Estimate Worksheet Items 1 - 6



You may enter data directly on this screen.	
Item 1 Design Phase	Select the design phase of the project from the drop-down menu. Select "Budget" if this is an initial request or if an architect/engineer has not yet been hired. Select "Schematic," "Design Development," or the appropriate phase of "Construction Documents" to reflect the actual status of the project.
Item 2 Project Type	Check the appropriate box or boxes to indicate the type of project.
Item 3 Design Period	Enter the number of months to design the project and the starting date in the blocks provided in a numerical format (Month/Day/Year).
Item 4 Estimated Bid Date	Enter the estimated bid date in a numerical format (Month/Day/Year). This date should be the same as the date provided in "Schedule" on the dark yellow tool bar.
Item 5 Construction Period	Enter the number of months to construct the project and the starting date in a numerical format Month/Day/Year). This date should be the same as the date provided in the "Schedule" section.
Project Description	The field is automatically populated with the project description entered in the "Main" Screen on the dark yellow tool bar.

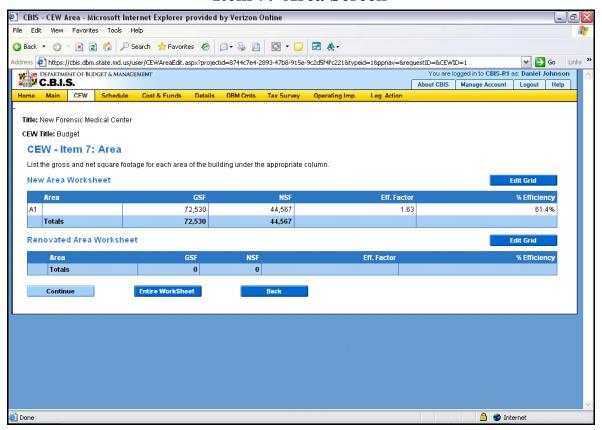
Cost Estimate Worksheet	
Items 1 – 6	
(Continued)	

Item 6 Estimated Midpoint

Based on the established project schedule, estimate the mid-point of the construction period. Allow time from project bid date to construction start date to account for award of the project and time before the contractor receives notice to proceed with construction.

Click "Continue." CBIS will display Item 7.

Cost Estimate Worksheet Item 7: Area Screen



Item 7 New Area Worksheet

Click on the "Edit Grid" button above the "New Area Worksheet" table. A Data Input Screen will appear.

If this project is still in the "Budget" stage and an A/E has not yet been hired, enter the net and gross square feet for the major functional areas requiring space that are outlined in your conceptual plans. Examples of such space include office suites, kitchens, instructional areas, and research labs.

If design/planning funding has been provided for the project and an A/E has been selected, areas can be listed by floor, or another type of category determined by the A/E. Square foot totals should then be provided based on the floors or the other category chosen.

A particular type of space can be entered in the window under "Area" in the Data Input Screen. The "GSF" and "NSF" can be entered in the windows next to the entry for the type of space. Calculation of the "Efficiency Factor" and "% Efficiency" can be calculated in one of two ways. First, click "Add Area" while still in the Data View Screen. The efficiency data will be calculated for the functional space whose GSF and NSF has just been entered. Also, fields in the Data View Screen will appear for entering another type of space.

Cost Estimate Worksheet Item 7: Area Screen (Continued)

Item 7 New Area Worksheet (Continued)

Second, after entering the type of functional space and its GSF/NSF, click "Save" and the efficiency data will be calculated and the Data View Screen for "CEW - Item 7: Area" will appear. You can then review the information that you have entered.

In contrast to the above description, there is also an alternative method for entering data. If you only know the net square feet and efficiency factor for each type of space, then enter this data and click on "CALC. GSF." CBIS will calculate the GSF. You will remain in the Data Input Screen and can continue to enter additional area data by repeating the process described at the beginning of this paragraph. After all entries have been completed, click "Save" and you will return to the Data View Screen and you should see all of the information that you have just entered. If you need to revise an entry, click "Edit Grid" and overtype or delete the entry.

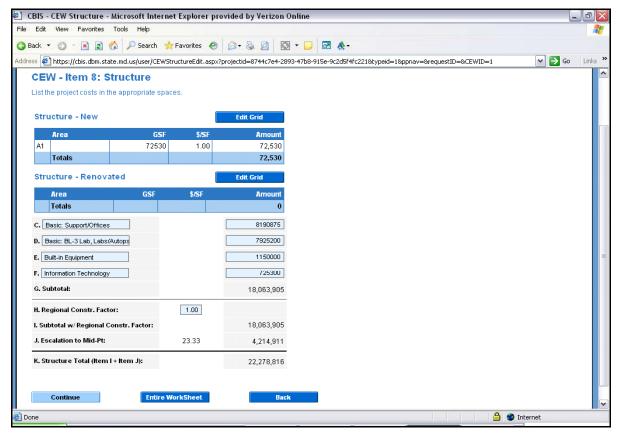
Notes:

1. To edit data already entered in the "New Area Worksheet," click "Edit Grid" on the Data View Screen. Place the cursor in the data field that you want to change and either overtype the existing entry or backspace to delete the existing entry. Then enter the new data and click "Save" to retain the changes. The Data View Screen will appear so that you can review the changes. To delete data already entered in the "New Area Worksheet," click "Edit Grid" on the Data View Screen. Click the "Delete" option and then click "Save." If you do not click "Save," the "Delete" command will not save the deletion. It should also be noted that the "Delete" command is only available for the last "Area" entered in the "New Area Worksheet. "Efficiency factors should be consistent with instructions in the DGS Procedures Manual. However, for out year estimating, use the minimum efficiency factor in the range provided by DGS.

Item 7 Renovated Area Worksheet

In order to enter data for "Renovated Areas" follow the same data input process as described above for "New Area Worksheet." When you are finished, click "Save" and CBIS will display the Data View Screen. Then click "Continue," and CBIS will display "Item 8 - Structure."

Cost Estimate Worksheet Item 8: Structure Screen



On the above Data View Screen, click "Edit Grid" above the "Structure -
New" table. CBIS will display a Data Entry Screen with all the areas
listed which you included in the previous screen for "CEW - Item 7 -
Area." Enter the appropriate cost per square foot. If you do not know
the appropriate cost per square foot dollar amount to enter, call the DGS
Cost Center at 410-767-4397.
Click "Save." CBIS will display the Data View Screen so that you can review the data that has just been entered.
Follow the same data input process as described above for "Structure - New," entering the cost per square foot for renovated areas.
Click "Save." CBIS will display the Data View Screen.
These items provide fields for additional entries that are not included in
the cost per square foot you entered in the "Structure - New" and/or
"Structure - Renovated" Fields. The items generally include information
technology, built-in equipment, asbestos abatement, and demolition that are part of general construction.

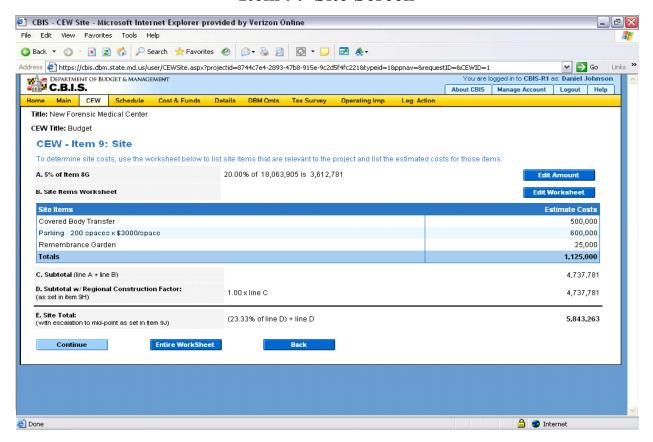
Cost Estimate Worksheet Item 8: Structure Screen (Continued)	
Items 8 C, D, E, and F (Continued)	Itemize and list these and similar items directly into fields 8C, 8D, 8E, and 8F. Entry of these items can be done directly on the above screen or when you have clicked "Edit Grid" and gotten a Data View Screen.
Item 8 G	This field is calculated by CBIS based on the data entered in 8A through 8 F.
Item 8 H	If an A/E has not been retained, enter the regional construction factor for the jurisdiction in which the project is located. This factor accounts for variations in the wage rates established by the Department of Labor, Licensing and Regulation as applicable to the 24 subdivisions in Maryland.
	After an A/E has been retained, estimates should be based on market conditions and industry forecasts. A regional construction factor of 1.0 should then be entered. The regional construction factor used for budget estimates is updated yearly. It is provided as part of the Notes on the Preparation of Capital Budget Requests that are included in the material that accompanies the annual capital budget request letter from the Office of Capital Budgeting. If needed, contact the DGS Cost Center for the latest regional construction factors.

"Continue" and CBIS will display "Item 9: Site."

CBIS calculates these fields based on information previously entered. Click

Item 8 I, J, and K

Cost Estimate Worksheet Item 9: Site Screen



Tame O A O/ of Itame OC	On the Date View Comer a default monagetone is smarified to coloulate the cost
Item 9 A% of Item 8G	On the Data View Screen, a default percentage is specified to calculate the cost of general site conditions. If this project is in the budget stage and an A/E has not yet been hired, then use the default percentage for the cost of utilities. As indicated in the screen, this percentage is multiplied times Item 8G, the Subtotal of the "Structure" costs. If you have reason to believe the default percentage is insufficient, click "Edit Amount," insert the appropriate percentage, and click "Save." An explanation for changing the percentage should be entered in the "CEW - Notes" Screen which follows "CEW - Total" (Items 22-27).
Item 9 B Site Items	Click "Edit Worksheet" above the "Site Items Worksheet" table. CBIS will
Worksheet	display a Data Input Screen.
	Enter any discrete site work items identified by your A/E. Such items may include: site preparation (grading, compaction), dewatering, retaining walls, shoring and underpinning, surfacing, lighting, landscaping, marine work, fencing, drainage, and building demolition.

Cost Estimate Worksheet Item 9: Site Screen (Continued)

Item 9 BSite Items
Worksheet (Continued)

Information for each particular kind of site improvement can be entered in the windows under "Site Items" on the Data Input Screen. In addition enter the "Estimate Cost" data for the particular item. If you want to add another site item after making the first entry, click "Add New" to make the entry. Repeat this process for all other entries. After they have been entered, click "Save" and you will return to the Data View Screen and you should see this information. If you need to revise an entry, click "Edit Worksheet" and overtype or delete the entry.

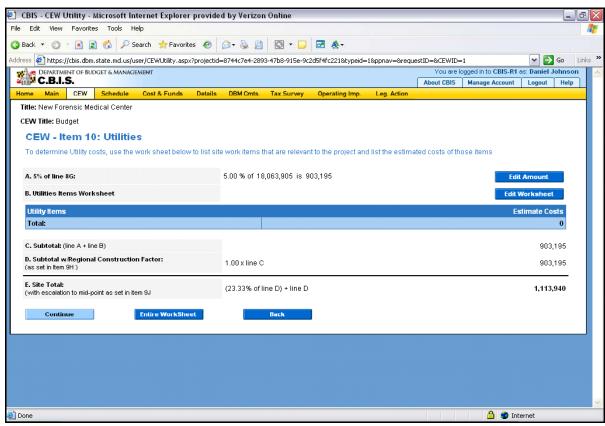
Item 9 C, D, and E Subtotals and Total

These are calculated fields. No entry is required.

Note: In the screen shot, the parenthesis under items 9D and 9E erroneously refers to Items 9H and 9J in the CEW screen shot above. The correct references are 8H and 8J in the CEW.

Click "Continue." CBIS will display Item 10: Utilities.

Cost Estimate Worksheet Item 10: Utilities Screen

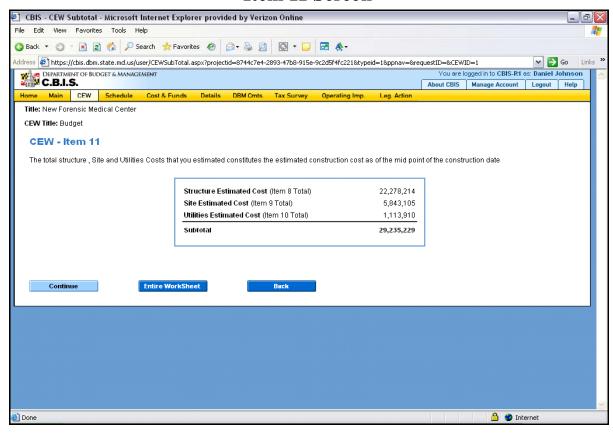


Item 10A% of	On the Data View Screen, a default percentage is specified to calculate the cost	
Item 8 G	for utilities. If this project is in the budget stage and an A/E has not yet been	
	hired, then use the default percentage for the cost of utilities. As indicated in the	
	screen, this percentage is multiplied times Item 8G, the Subtotal of the	
	"Structure" costs. If you have reason to believe the default percentage is	
	insufficient, click "Edit Amount," insert the appropriate percentage, and click	
	"Save." An explanation for changing the percentage should be entered in the	
	"CEW - Notes" Screen which follows "CEW - Total" (Items 22-27).	
Item 10 B	If an A/E has been hired, click "Edit Worksheet" above the "Utility Items" Grid.	
Utilities	CBIS will display a Data Input Screen.	
Items Worksheet		
	Enter any discrete utility items identified by your A/E. Such items may include	
	water treatment plants, wastewater treatment plants, components, septic systems,	
	water distribution-domestic, water distribution-fire, wells, sanitary distribution,	
	steam distribution, electric distribution, telecommunications emergency power,	
	utility tunnel, and fuel systems.	
	utility tunnel, and fuel systems.	

Cost Estin	mate Worksheet
Item 10:	Utilities Screen
(Continued)	

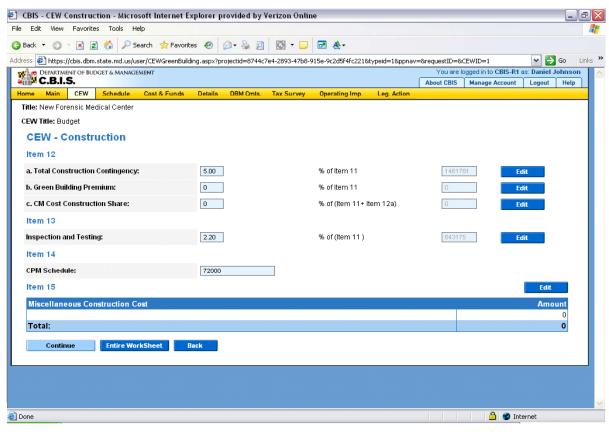
Item 10 B Utilities Items Worksheet (Continued)	Information for each particular kind of utility item, can be entered in the fields under "Utility Items" on the Data Input Screen.
	In addition enter the "Estimate Cost" data for the particular item. If you want to add another utility item after making the first entry, click "Add New" to make the entry. Repeat this process for all other entries. After they have been entered, click "Save" and you will return to the Data View Screen and you should see this information. If you need to revise an entry, click "Edit Worksheet" and overtype or delete the entry.
Items 10 C, D, and E	These are calculated fields. No entry is required.
Subtotals and Total	
	Note: In the above screen shot, the parenthesis under items 10D and 10E erroneously refers to Items 9H and 9J in the CEW screen shot above. The correct references are 8H and 8J in the CEW. Click "Continue." CBIS will display Item 11.

Cost Estimate Worksheet Item 11 Screen



This is a Data View Screen, which summarizes and provides a cost subtotal for the estimated costs for "Structure," "Site," and "Utilities." There is no data entry required on this screen. If any of the costs shown for the three cost areas is incorrect, return to the prior screens and make appropriate corrections. Click "Continue." CBIS will display Items 12, 13, 14, and 15, which concern "Construction."

Cost Estimate Worksheet Construction Screen

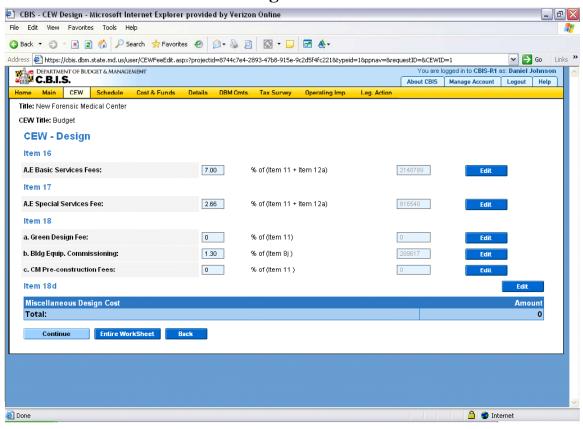


The above screen is both a Data View Screen and a Data Entry Screen. For items 12a, 12b, 12c, and 13, percentage data can be entered directly in the fields provided. If a specific dollar amount is known for any of these items, then Click "Edit" and CBIS will display a data entry screen to enter the amount. Click "Save" to return to the screen above.

The contingency amount should be calculated at 10% of Item 11 for out year projects. However, when the project becomes a budget year request, the 10% contingency should be reduced to 5% of Item 11. This funding is considered a construction contingency for change orders during construction. As noted, you may enter either a percentage or the full amount. Item 12 b Green Building Premiums Only fill in this block if the project is proposed as a "Green Building." This is for the application of costs related to the construction of a building associated with green construction practice, which conform with LEED Silver rating principles outlined by the Maryland Green Building Council.

Cost Estimate Worksheet Construction Screen (Continued)		
Item 12 b Green Building Premiums (Continued)	You may directly enter either the percentage on the "CEW - Construction" or click "Edit" and enter the total amount of the estimated or contracted fee for green building construction. The typical estimated fee should be approximately 2.5% to 3% of the estimated construction cost.	
Item 12 c CM Cost Construction Share	Enter a cost for construction management. Use \$10,000 plus .001 of Item 11 (i.e. subtotal for estimated costs of Structure, Site, and Utilities). This item should only be filled in by Higher Education agencies; other agencies should leave this item blank.	
Item 13 Inspection and Testing	Enter a percentage or an amount for construction inspection and testing based upon the estimated construction cost. Shown below are rates applied against the sum of Item 11 and Item 12a. Expected Construction Cost Rate 0 - 4,000,000	
Item 14 CPM Schedule	Enter a cost for critical path scheduling. Use \$10,000 plus .001 of Item 11 or estimate an allowance. Higher Education agencies should leave this item blank.	
Item 15 Miscellaneous Construction Costs	Click on the "Edit" button and a Data Entry Screen will appear. Enter any miscellaneous costs and include a reference. These costs should be construction related (e.g. separate related construction contracts, utility connection fees, etc.). Click "Add" to include additional items and their respective "Amount." Clicking "Save" will save the added items and return you to the Data View Screen. Click "Continue." CBIS will display Items 16, 17, 18a, 18b, 18c, and 18d.	

Cost Estimate Worksheet Design Screen



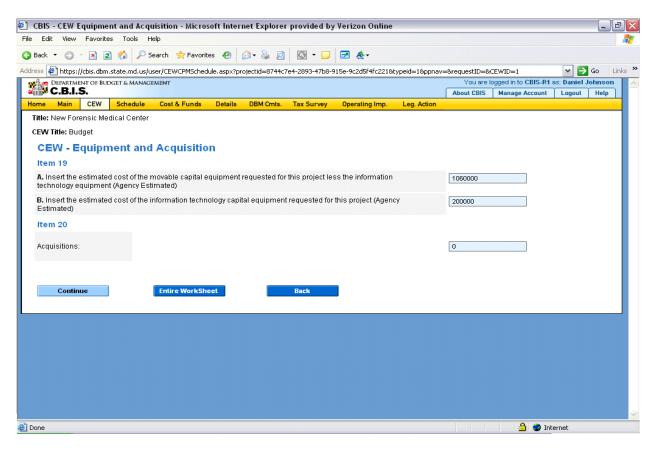
The above table is both a Data View Table and a Data Entry Screen. For items 16, 17, 18a, 18b, and 18c percentage information can be entered directly in the fields provided. If a specific amount is known for any of these items, then Click "Edit" and CBIS will display a data entry screen on which the specific dollar amount can be entered. Click "Save" on the data entry screen to return to the screen above

o return to the screen above.	
Item 16 A/E Basic Services	Enter the total amount, or percentage, of all basic estimated or
Fee	contracted A/E services fees, including approved change orders for the project as of the date of the estimate. The typical estimated fee should be 7% for new construction and 7.5% for renovation. Fees in excess of these percentages need to be justified. A space is provided for explanatory notes regarding this matter after "CEW - Totals" (Items 22-27).
Item 17 A/E Special Services Fee	Enter the total amount, or percentage, of all estimated or contracted fees for special design services. Examples of this include special consultants for acoustics, kitchen, telecommunications, museum exhibit design services, special surveys, etc. You may enter either the percentage or the full amount.

Cost Estimate Worksheet Design Screen (Continued)

(Continued)		
Item 18 a Green Design Fee	Only fill in this block if the project is proposed as a "Green Building." This is for the application of costs related to the design of a building associated with green construction practice, which conform to LEED Silver rating principles outlined by the Maryland Green Building Council.	
	Enter the total amount, or percentage, of the estimated or contracted fee for green sustainable design practice. The estimated fee should be approximately 1% to 2% of the estimated construction cost (Item 11 above). This percentage may be increased or decreased based on specific information and/or applications identified by the cost estimator prepare.	
Item 18 b Building Equipment, Commissioning	Enter a percentage or the amount for commissioning the building. This applies only to buildings with complex mechanical and electrical systems that require specific adjustments, testing, and the training of personnel to operate. The amount should be computed as 1.5% of the cost of the Structure (Item 8J).	
Item 18 c CM Pre- construction Fees	Enter a percentage or the amount for construction management. The amount should be computed based on the sum of 0.5% of the estimated construction cost (Item 11) and the construction contingency (Item 12a). As in Item 12c, this item only applies to Higher Education agencies.	
Item 18 d Miscellaneous Design Costs	Click on the "Edit" button and a Data Entry Screen will appear. Enter any miscellaneous costs for design and include a reference. These costs should be design related, (e.g. value engineering, boundary and archaeological surveys, borings, test pits, etc). Click "Add" to enter additional items. Clicking "Save" will save the added items and return you to the Data View Screen. Click "Continue." CBIS will display Items 19 and 20.	

Cost Estimate Worksheet Equipment and Acquisition Screen

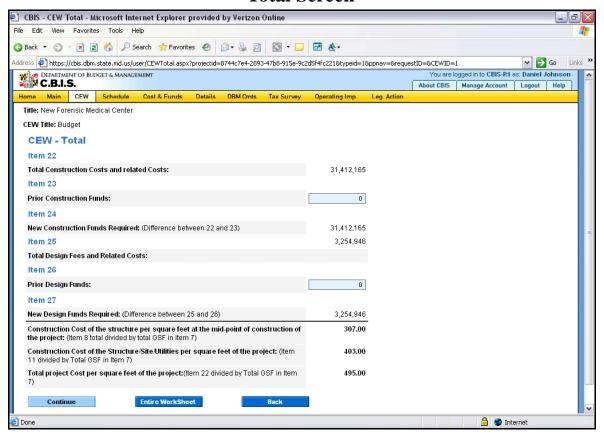


This is a Data Entry Screen in which costs can be directly entered.		
Item 19 A Movable Capital Equipment	Enter the estimated cost of movable equipment requested for this project less the information technology equipment required.	
Item 19 B Information Technology Capital Equipment	Enter the estimated cost of the information technology capital equipment (e.g. voice, video, data, and wireless) requested for this project. Items typically included here are equipment that has a very substantial cost associated with them, such as an electronic private branch exchange (PBX) that serves a major building or buildings in a facility on a campus, or hub servers that support a complex network of data links. If the IT work is anticipated to be handled by a separate vendor contract then it should also include fiber optic or copper vertical riser distribution cables, cable termination equipment and related wiring in wiring closets or each floor, and wire connecting the wire closet terminations to the wall jacks or other outlets to which telephone stations and computers will be connected that are not installed as part of the general contract. Do not include items ineligible for capital funding.	

Cost Estimate Worksheet Equipment and Acquisition Screen (Continued)

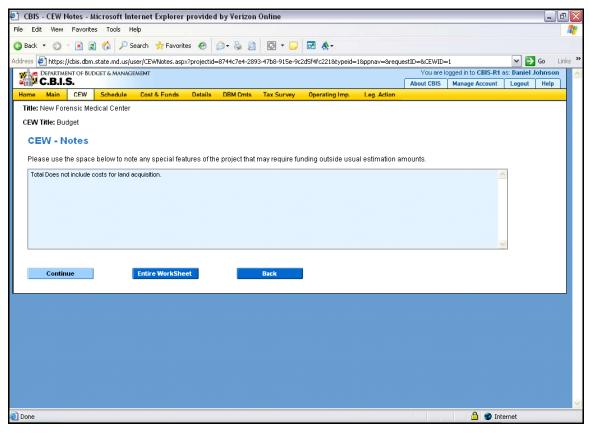
Item 20 Acquisition	If applicable, enter the total cost of any acquisitions, including land and property.
Item 21 Not Shown	This is a calculated field for Total Project Costs. While it does not appear on the CBIS screen; it will appear on the CEW Report. No entry is required.
	Click "Continue." CBIS will display Items 22, 23, 24, 25, 26, and 27.

Cost Estimate Worksheet Total Screen



This is a Data Entry Screen in which costs can be directly entered.		
Item 22 Total Construction	This field is populated by CBIS based on information previously	
and Related Costs	entered.	
Item 23 Prior Construction	Enter the total of all prior construction funds authorized for this	
Funds	project.	
Item 24 New Construction	This field is populated by CBIS based on information previously	
Funds Required	entered.	
Item 25 Total Design Fees	This field is populated by CBIS based on information previously	
and Related Costs	entered.	
Item 26 Prior Design Funds	Enter the total of all prior design funds authorized for this project.	
Item 27 New Design Funds	This field is populated by CBIS based on information previously	
Required	entered. Click "Continue." CBIS will display a page for any notes	
	that might explain items not accounted for on the previous pages.	

Cost Estimate Worksheet Notes Screen

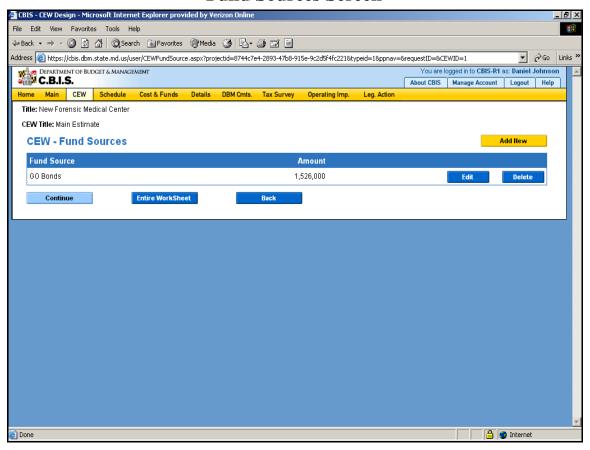


Notes This is a Data Entry Screen in which information can be directly entered.

Use this space to explain any costs that are unusually large or fall outside of the fixed percentages normally used to calculate building costs.

Click "Continue." CBIS will display a "CEW - Fund Sources" screen.

Cost Estimate Worksheet Fund Sources Screen



Fund Sources

Click "Add New" on the Data View Screen.

For all prior authorizations for this project, the "Fund Source" and "Amount" must be entered. After entering the information for a particular fund source, click "Update" on the Data Entry Screen. The Data View Screen will appear and you should see the information that has just been entered. To enter additional fund source data, repeat the clicking "Add New"/ "Update" process. Ideally, you should enter the item number and budget year for these prior authorized funds; for example, Item 25 of MCCBL 2005. In the above example, the item number was unknown at the time these instructions were prepared.

Click "Continue" and you will be able to view the entire Cost Estimate Worksheet as a "CEW - Summary." After reviewing the summary, changes can be made by clicking "Edit This Section" containing the item of concern.